

DOCUMENT RESUME

ED 038 507

VT 010 509

TITLE A Description and Source Listing of Curriculum
Materials in Agricultural Education, 1969-1970.
INSTITUTION American Vocational Association, Washington, D.C.
Agricultural Div.
PUB DATE 70
NOTE 29p.
AVAILABLE FROM Vocational Agriculture Service, 434 Mumford Hall,
University of Illinois, Urbana, Illinois 61801
EDRS PRICE MF-\$0.25 HC-\$1.55
DESCRIPTORS *Agricultural Education, Agricultural Engineering,
Agricultural Occupations, Agronomy, Animal Science,
*Annotated Bibliographies, Farm Management, Field
Crops, Forestry, Horticulture, *Information Sources,
*Instructional Materials, Soil Science

ABSTRACT

The purpose of this annotated bibliography is to provide teachers of vocational agriculture, agricultural supervisors, and agricultural teacher educators with information on current curriculum materials available to them. Classified according to the AGDEX filing system, the 163 references are grouped under the headings: (1) Field Crops, (2) Horticulture, (3) Forestry, (4) Animal Science, (5) Soils, (6) Diseases and Pests, (7) Agricultural Engineering, (8) Agricultural Economics, (9) Agricultural Occupations, and (10) Professional. The availability and price of each reference is specified in the annotation. (AW)

ED038507

A DESCRIPTION AND SOURCE LISTING
OF
CURRICULUM MATERIALS
IN
AGRICULTURAL EDUCATION
1969-1970

Prepared by

CURRICULUM MATERIALS COMMITTEE

Agricultural Education Division

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Printed and Distributed by

VOCATIONAL AGRICULTURE SERVICE
434 Mumford Hall
Urbana, Illinois 61801

for

AMERICAN VOCATIONAL ASSOCIATION
1025 15th Street, N.W.
Washington, D.C. 20005

VT010509

FOREWORD

The "Description and Source Listing of Curriculum Materials in Agricultural Education" is published annually by the Curriculum Materials Committee of the Agricultural Education Division of the American Vocational Association. The purpose of the publication is to inform teachers of vocational agriculture, agricultural supervisors, agricultural teacher educators, and other interested persons of current agricultural curriculum materials that are available to them.

The Curriculum Materials Committee collects information concerning available curriculum materials prior to the annual A. V. A. convention. The materials are classified by the committee for the "Source Listing." The criteria used for selecting the information is as follows:

- a. The material has been developed by persons engaged in vocational education in agriculture for use primarily in that field.
- b. The material has been developed during the past year or is current information that has not previously been listed in the "Source Listing."
- c. The material is not being distributed commercially.
- d. The material would be of interest and use beyond the boundary of the state in which it is being prepared.
- e. The material will be available from its source and/or will be available through the ERIC Clearinghouse.

The materials are classified according to the AGDEX filing system which has been revised by the Curriculum Materials Committee. The AGDEX system is the basis of the organization of this "Source Listing."

It is the wishes of the Committee that this "Source Listing" will prove useful to you in obtaining up to date information.

Harlan E. Ridenour, Chairman
Agricultural Education Curriculum
Materials Committee
Agricultural Education Division
American Vocational Association

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AGDEX FILING SYSTEM - AIM and ARM

AGDEX, A SYSTEM FOR CLASSIFYING, INDEXING, AND FILING AGRICULTURE PUBLICATIONS. Howard L. Miller and Ralph J. Woodin, revised 1969. The AGDEX filing system is a comprehensive numerical system designed for use by teachers of vocational agriculture and county extension agents using a broad spectrum of agricultural publications. AGDEX was designed for nationwide use and can be adapted to the agriculture of widely differing areas. AGDEX is published on a non-profit basis by the American Vocational Association for the Agricultural Education Division as a service to its members. The AGDEX filing system includes a spiral bound filing guide as well as nearly 1,200 color coded, gummed labels. Available from: Publications Department, American Vocational Association, 1510 H Street, N. W., Washington, D. C. 20005. Price: \$4.00 per single copy. \$3.50 in lots of 50 or more.

AGDEX FILING SYSTEM, INSTALLING AND USING. Ralph J. Woodin and Harlan E. Ridenour, 1969. A series of 29 color slides and script explaining what AGDEX filing will do for you, how the system may be installed, and how to use the filing system. Should be used with teachers and others desiring to learn how to install and use the AGDEX filing system. Available from: Harlan E. Ridenour, Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio, 43210. Price: \$4.50.

ABSTRACTS OF INSTRUCTIONAL MATERIALS IN VOCATIONAL AND TECHNICAL EDUCATION (AIM). Quarterly (Fall, Winter, Spring, Summer). Announces the availability of documents acquired and processed by the ERIC Clearinghouse on Vocational and Technical Education. Includes abstracts of materials typically designed for teacher use or student use in the classroom, and annotations of bibliographies or lists of instructional materials in all vocational areas. It will be of particular interest to teachers, curriculum specialists, supervisors and administrators involved in the use of instructional materials in the teaching-learning setting, or in curriculum development. The publication is organized by service area to assist users in finding a central listing of materials relating to their specific interest (e.g. agricultural education, business and office education, distributive education, etc.).

The first issue began with Fall 1967. At this time, the four issues for the period Fall 1967 - Summer 1968 and the AIM-ARM Annual Index 1967-68 are available only on microfiche or facsimile copy. Microfiche or facsimile copy for all previous issues may be ordered from ERIC Document Reproduction Service (EDRS), The National Cash Register Company, 4936 Fairmont Avenue, Bethesda, Maryland 20014. Please write to EDRS for order forms. Price quotations are as follows:

ED 013 337	Fall	1967 AIM	MF - \$.75	or	HC - \$ 9.35
ED 015 336	Winter	1967 AIM	MF - \$1.00	or	HC - \$10.50
ED 017 745	Spring	1968 AIM	MF - \$.75	or	HC - \$ 9.95
ED 020 441	Summer	1968 AIM	MF - \$.75	or	HC - \$ 8.95
ED 023 936	Fall	1968 AIM	MF - \$.75	or	HC - \$ 9.30
ED 028 302	Winter	1968 AIM	MF - \$.75	or	HC - \$ 8.45
ED 030 769	Spring	1969 AIM	MF - \$.75	or	HC - \$ 8.70
ED 032 433	Summer	1969 AIM	MF - \$.75	or	HC - \$ 8.30

Current annual subscriptions are available for \$9.00 per year beginning with the Fall 1968 issue or subsequent issues. Send order indicating quarter and year subscription is to begin to: ERIC Clearinghouse, The Center for Vocational and Technical Education, 1900 Kenny Road, Columbus, Ohio 43210.

ABSTRACTS OF RESEARCH AND RELATED MATERIALS IN VOCATIONAL AND TECHNICAL EDUCATION (ARM). Quarterly (Fall, Winter, Spring, Summer). Announces the availability of documents acquired and processed by the ERIC Clearinghouse on Vocational and Technical Education. Includes abstracts of research and other materials which are useful to a wide range of users such as researchers, supervisors, teacher educators, educational specialists, administrators, teachers and others who have an interest in vocational and technical education. The publication is organized by topics such as administration, evaluation, teaching and learning, facilities and equipment, curriculum, etc. It also includes a vocational service index that provides a central listing of materials relating to specific areas of interest (e.g. agricultural education, business and office education, distributive education, etc.).

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ED 013 336	Fall	1967 ARM	MF - \$1.00	or	HC - \$10.60
ED 015 335	Winter	1967 ARM	MF - \$.75	or	HC - \$ 9.10
ED 016 875	Spring	1968 ARM	MF - \$.75	or	HC - \$ 9.10
ED 019 525	Summer	1968 ARM	MF - \$1.25	or	HC - \$14.15
ED 022 064	AIM-ARM Annual Index, 1967-68		MF - \$.50	or	HC - \$ 6.30
ED 022 970	Fall	1968 ARM	MF - \$1.25	or	HC - \$14.10
ED 027 437	Winter	1968 ARM	MF - \$1.00	or	HC - \$10.65
ED 030 000	Spring	1969 ARM	MF - \$1.00	or	HC - \$10.40
ED 031 586	Summer	1969 ARM	MF - \$1.00	or	HC - \$10.45

Current annual subscriptions are available for \$9.00 per year beginning with the Fall 1968 issue or subsequent issues. Send order indicating quarter and year subscription is to begin to: ERIC Clearinghouse, The Center for Vocational and Technical Education, 1900 Kenny Road, Columbus, Ohio 43210.

AGDEX 100 FIELD CROPS

1. PLANT SCIENCE DEMONSTRATIONS - STUDYING SEED RATIOS -- CORN. 1969. AGDEX 111/40. R. L. Courson, Vocational Agricultural Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This demonstration is designed for student use. It provides full directions for carrying out the demonstration, including the source from which the seed can be obtained. Price: \$.15 per pack of 10, postpaid when payment accompanies order.
2. DETERMINING MARKET GRADES OF CORN. Slidefilm 733. 1969. AGDEX 111/844. R. L. Courson and E. W. Vernon, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 47 frames. It discusses the various factors and standards used to determine market grades of shelled corn. It gives the step by step procedure for obtaining the sample, making the test weight, making the moisture test, and a detailed analysis of the sample. Price: \$3.00 postpaid when payment accompanies order.
3. FACTORS AFFECTING CLASSES AND GRADES OF SHELLLED CORN. Slidefilm 734. 1969. AGDEX 111/844. R. L. Courson and E. W. Vernon, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 42 frames. It discusses the various classes and grades of shelled corn and pictures the various damaged kernels that affect market grades. Price: \$2.85 postpaid when payment accompanies order.
4. FACTORS AFFECTING CLASSES AND GRADES OF WHEAT. Slidefilm 776. 1969. AGDEX 112/844. R. L. Courson and E. W. Vernon, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 53 frames. It discusses the various classes and grades of wheat and pictures the various damaged kernels that affect market grades. Price \$3.20 postpaid when payment accompanies order.
5. PROFITABLE OAT PRODUCTION. Slidefilm 770. 1969. AGDEX 113. D. J. Schrickel and R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 38 frames. It discusses the steps to better profits in oat production-- such as high quality seed, weed control, proper fertility, and good cultural practices. This slidefilm was produced in cooperation with the Quaker Oats Company who subsidized the costs of production. The price is for postage and handling only. Price: \$.25 postpaid when payment accompanies order.
6. FACTORS AFFECTING CLASSES AND GRADES OF OATS. Slidefilm 772. 1969. AGDEX 113/844. R. L. Courson and E. W. Vernon, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 42 frames. It discusses the various classes and grades of oats and pictures the various damaged kernels that affect market grades. Price: \$2.85 postpaid when payment accompanies order.
7. OAT PRODUCTION VISUALS. 1969. AGDEX 113. D. J. Schrickel and R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This set of 16 visuals was produced cooperatively with the Quaker Oats Company, Chicago, Illinois. They are 8 1/2 x 11" instructional illustrations for use in making transparencies for overhead projection, for

use with an opaque projector, or for use as charts. The text, to discuss each visual, is printed on the back and the set is contained in a manila pocket folder for filing. Price: \$.55 postpaid when payment accompanies order.

8. PRODUCING QUALITY HAY, No. 521. 1968. AGDEX 120/50. Phillip Nix, Agriculture Education teaching materials center, Texas A & M University, College Station, Texas 77846. Contains the technical information to assist teachers in teaching the subject matter. Price: \$.55.

9. MORPHOLOGY OF GRASSES -- 168. 1969. AGDEX 127. Howard Rhoads, Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. Set of 22 overhead transparency masters, plus 9 overlays, depicting important agricultural grasses (including grains) and the various parts of typical grass plants. A 12-page descriptive booklet with glossary describes the subject of each transparency. Price: \$3.25.

10. A TEACHER'S GUIDE ON MODERN SOYBEAN PRODUCTION. 1969. AGDEX 141. David L. Williams and Roger L. Courson, Agricultural Education Division, University of Illinois, Urbana, Illinois 61801. This 22 page publication contains suggestions and teaching ideas on soybean production which instructors may want to use in developing their own teaching plans. It contains anticipated problems, suggested activities, and references for 12 problem areas. Price: \$.50.

11. PLANNING TO GROW TOBACCO, HS-12. 1968. AGDEX 181. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the planning for a tobacco crop. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

12. PRODUCING TOBACCO PLANTS, HS-13. 1968. AGDEX 181. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the production of tobacco plants. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

13. GROWING TOBACCO, HS-14. 1968. AGDEX 181. Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the production of tobacco. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

14. HARVESTING, HOUSING, CURING, STRIPPING AND MARKETING TOBACCO, HS-15. 1968. AGDEX 181. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the harvesting, housing, curing, stripping and marketing of tobacco. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

AGDEX 200 HORTICULTURE

15. VEGETATIVE PROPAGATION, HS-78. 1968. AGDEX 200/20. Billy J. Vice, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the teaching of Horticultural Vegetative Propagation. Price: 1 copy free to State Directors and Head Teacher Trainers. of Agricultural Education.

16. PLANT GROWING MEDIA, HS-80. 1968. AGDEX 200/500. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes specific content for teacher use in lesson plan development in the Plant Growing Media of Horticulture. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

17. GREENHOUSE CROP PRODUCTION, Vol. 10, No. 3t and Vol. 10, No. 3s. 1969. AGDEX 200/20. R. F. Stinson, The Department of Agricultural Education, The Pennsylvania State University, University Park, Pennsylvania 16802. Teacher's manual contains same material as student's manual plus teaching suggestions and references. Price: Not yet established.

18. FOLIAGE PLANT IDENTIFICATION, PART I. Slidefilm 610. 1969. AGDEX 270. K. N. Schumacher and R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 49 frames. The following information is shown along with representative pictures: (a) Common and scientific names; (b) Descriptive information; (c) Use, and (d) Cultural information. Price: \$3.10 postpaid when payment accompanies order.

19. PRACTICE SET FOR FOLIAGE PLANT IDENTIFICATION, PART I. (Slidefilm 610 Supp.). 1969. AGDEX 270. K. N. Schumacher and R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 39 frames. It supplements the slidefilm entitled "Foliage Plant Identification, Part I" used as a test or summary. It presents a set of pictures of foliage plants for teaching student identification. It contains no script. Price: \$2.75 postpaid when payment accompanies order.

20. FOLIAGE PLANT IDENTIFICATION, PART II. Slidefilm 611. 1969. AGDEX 270. K. N. Schumacher and R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 49 frames. The following information is shown along with representative pictures: (a) Common and scientific names; (b) Descriptive information; (c) Use; and (d) Cultural information. Price: \$3.10 postpaid when payment accompanies order.

21. FOLIAGE PLANT IDENTIFICATION, PART II. (Slidefilm 611 Supp.). 1969. AGDEX 270. K. N. Schumacher and R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 39 frames. It supplements the slidefilm entitled "Foliage Plant Identification, Part II" used as a test or summary. It presents a set of pictures of foliage plants for teaching student identification. It contains no script. Price: \$2.75 postpaid when payment accompanies order.

22. **BUYING BEDDING PLANTS.** VAS 5010. 1969. AGDEX 270. R. L. Courson and G. M. Fosler, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 20-page subject-matter unit discusses such things as: (1) Should I buy plants or grow my own from seed? (2) What varieties should I select? and (3) How should I care for bedding plants? Price: \$.25 post-paid when payment accompanies order.

23. **LANDSCAPING THE HOME GROUNDS,** Slide Series and script. 1969. AGDEX 271. Craig S. Oliver, Ornamental Horticulture Specialist, The Pennsylvania State University. Available from: Agricultural Education Curriculum Materials, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A series of 130 color slides and script which illustrates the slides. The series is divided into four sections as follows: (1) Introduction to Design, 24 slides; (2) Site Analysis, 26 slides; (3) The Public Area, 40 slides; (4) The Private Area, 40 slides. The slide series was developed by Dr. Oliver while working with the Ohio Agricultural Education Curriculum Materials Service. Price: \$21.00.

24. **PLANTINGS FOR PUBLIC BUILDINGS AND COMMERCIAL PROPERTIES,** Slide series and script. 1970. AGDEX 272. Howard Broock and Gordon White, Instructional Materials Service, Division of Agricultural Education, 201 Stone Hall, Cornell University, Ithaca, New York 14850. Thirty color slides illustrate several types of attractively landscaped commercial and public properties. and several plant materials which lend themselves to environmental and structural characteristics of large building sites. The script explains the basic principles to be considered in selecting plant materials for these purposes. Price: \$4.50.

25. **LEAF MOUNTS - ORNAMENTAL TREES AND SHRUBS.** 1969. AGDEX 272. James Lewis, Instructional Materials Service, Division of Agricultural Education, 201 Stone Hall, Cornell University, Ithaca, New York 14850. Thirty-three 9 x 12 plastic laminate, cardboard back mounts of the following plant materials: Amur Maple, Speckled Alder, Gray Birch, Shagbark Hickory, Yellow-Wood, Rock Cotoneaster, Washington Thorn, Winged Euonymus, Glossy Wintercreeper, American Beech, Arnold Forsythia, Maidenhair-tree, Thornless Honey Locust, Sargent Juniper, Creeping Juniper, Andorra Juniper, Flowering Crabapple, Common Apple, Austrian Pine, American Planetree, Purple Leaf Plum, Douglas Fir, Pin Oak, Fragrant Sumac, Japanese Snowbell, Hatfield Yew, American Arborvitae, European Linden, Canada Hemlock, Arrowwood, and Wayfaring Tree. A leaf identification key is included. Price: \$16.00.

26. **GROUNDS MAINTENANCE AND CONSTRUCTION -- ORNAMENTAL HORTICULTURE VISUALS.** 1969. AGDEX 272. K. N. Schumacher, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a set of 36 8 1/2 x 11" instructional illustrations printed on heavy paper. They are for making transparencies for overhead projection, for use with an opaque projector, or for use as charts. The set is contained in a manila pocket folder for filing. Price \$1.05 postpaid when payment accompanies order.

27. **LANDSCAPE MAINTENANCE--188.** 1969. AGDEX 272. Scott Wilson, Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. This 49-page manual, liberally illustrated, is by an experienced landscaper and high school teacher. Charts and illustrations reinforce the text presentation of such topics as pesticides, transplanting tools, estimating, business practices and safety. Material is primarily for the West Coast, but most of the content is adaptable for other sections of the country. Price: \$1.95.

28. ESTABLISHING A LAWN. VAS 5008. 1969. AGDEX 273. K. N. Schumacher and R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 8-page subject-matter unit discusses some of the following questions: (1) How should I prepare the soil? (2) What grasses should I consider? (3) What seeding practices should I follow? (4) How should I care for the new lawn? and (5) How should I establish a lawn with sod? Price: \$.10 postpaid when payment accompanies order.

29. LAWN CARE AND MANAGEMENT, Slide Series and Script. Revised 1969. AGDEX 273. Robert W. Miller, Department of Agronomy, The Ohio State University. Available from: Ohio Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A series of 46 color slides and script which illustrates the slides. The following areas are included: Seed selection, seeding, fertilizing, mowing, weed control, disease control, watering, and thatch control. Price: \$7.50.

30. TREE IDENTIFICATION - WESTERN PINES -- 189. 1969. AGDEX 275. Starr Jenkins, Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. This multi-media kit consists of twenty full-color 35mm slides, ten overhead transparency masters and a manual. Ten species of Western conifers are pictured and described. Ten of the slides show a distant view of a typical specimen of one species, plus a close-up view of the bark and needles or leaves, with the common and Latin names of the species superimposed on the view. The other ten have the names omitted, for testing. The overheads each show one of the species, with drawings that emphasize its unique features. Price: \$6.50 for complete kit; \$5.00 for slides only; \$2.00 for manual and plates only.

31. TREES FOR LANDSCAPING, IDENTIFICATION, CULTURE, USE. 1969. AGDEX 275. Craig S. Oliver, Ornamental Horticulture Specialist, The Pennsylvania State University. Available from: Ohio Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. The publication is designed to provide a simple key for the identification of twenty trees commonly used for landscaping. The publication was developed by Dr. Oliver while studying at The Ohio State University. Price: \$2.10.

32. SHRUBS FOR LANDSCAPING, IDENTIFICATION, CULTURE, USE. 1969. AGDEX 276. Craig S. Oliver, Ornamental Horticulture Specialist, The Pennsylvania State University. Available from: Ohio Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. The publication is designed to provide a simple key for the identification of 32 shrubs commonly used for landscaping. The publication was developed by Dr. Oliver while studying at The Ohio State University. Price: \$2.55.

33. ARRANGING FLOWERS IN VASES AND BOWLS. VAS 5009. 1969. AGDEX 280. Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 20-page subject-matter unit contains ideas for various flower arrangements. It also discusses the following: (1) Factors to consider when selecting plant material; (2) Tools and materials needed for arrangements; (3) Containers to use; and (4) How to prepare and design flower arrangements. Price: \$.25 postpaid when payment accompanies order.

34. GARDEN FLOWERS, ANNUALS--PART I. Slidefilm 601. 1969. AGDEX 281. K. N. Schumacher and R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame

slidefilm of 50 frames. It illustrates common annuals, giving their scientific names, normal height range, uses, and flower colors. Price: \$3.10 postpaid when payment accompanies order.

35. GARDEN FLOWERS, ANNUALS--PART II. Slidefilm 602. 1969. AGDEX 281. K. N. Schumacher and R. L. Courson, Vocational Agriculture Service, University of Illinois, Urbana, Illinois 61801. This is a color single-frame slidefilm of 50 frames. It illustrates common annuals, giving their scientific names, normal height range, uses, and flower colors. Price: \$3.10 postpaid when payment accompanies order.

AGDEX 300 FORESTRY

36. FORESTRY, HS 31. 1969. AGDEX 300. Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in developing lesson plans in the general Forestry area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

37. GROWTH OF TREES, HS 31-A. 1968. AGDEX 300. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes specific content for teacher use in lesson plan development in the Forestry area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

38. THE RESOURCES, HS 31-B. 1968. AGDEX 300. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes specific content for teacher use in lesson plan development in the Forestry area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

39. ESTABLISHING TREES, HS 31-C. 1968. AGDEX 300. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes specific content for teacher use in lesson plan development in the Forestry area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

40. FOREST PROTECTION, HS 31-D. 1968. AGDEX 300. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes specific content for teacher use in lesson plan development in the Forestry area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

41. MANAGING WOODLAND, HS 31-E. 1968. AGDEX 300/10. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. This unit includes specific content for teacher use in lesson plan development in the Forestry area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

42. FOREST MEASUREMENTS, HS 31-F. 1968. AGDEX 300/53. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes specific content for teacher use in lesson plan development in the Forestry area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

AGDEX 400 ANIMAL SCIENCE

43. PROBLEM AREA OUTLINE FOR ADVANCED LIVESTOCK PRODUCTION. 1969. AGDEX 400. Bob R. Stewart, Agricultural Education Department, University of Missouri, 122 Waters Street, Columbia, Missouri 65201. The material was developed as a guide suggesting course content for Advanced Livestock Production. The major areas of beef, dairy, and swine are included.

44. HOG PRODUCTION, HS 40. 1969. AGDEX 440/20. Michael Eirich and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in developing lesson plans in the Hog Production area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

45. SOURCE UNIT IN ANIMAL BREEDING. 1969. AGDEX 400/30. Charles A. Malone, Agricultural Education Section, Department of Vocational Education, Colorado State University, Fort Collins, Colorado 80521. Teaching plans for a unit in Animal Breeding. Price: \$1.00. Limited to single copy distribution.

46. GENETICS--169. 1969. AGDEX 400/30. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. This set of overhead transparency masters includes nine plates and seven overlays. Plate topics include mitosis, modified two-pair ratios, sex-linked genes, lethal genes and others, all related to agricultural applications. The checkerboard method is used to demonstrate combinations of genes that produce different characteristics. A four-page teacher's guide is included. Price: \$1.95.

47. LIVESTOCK--170. 1969. AGDEX 400/40. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. This series of eight overhead transparency masters and nine overlays includes typical farm livestock with all parts identified. In addition, the wholesale cuts of meat are outlined on each meat animal, and the comparative weight of each cut is noted. Animals pictured include beef cattle, dairy cattle, swine, sheep, and horses. Price: \$1.65.

48. JUDGING BEEF CATTLE, SWINE, AND SHEEP. 1969. AGDEX 400/45. W. H. Witt, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a 24-page, 8 1/2 x 11" booklet that discusses and illustrates judging procedures for beef cattle, sheep, and swine. It is printed in two colors--the second color being used to emphasize main points and headings. Price: \$.25 postpaid when payment accompanies order.

49. A SET OF TRANSPARENCIES ON SELECTING, FITTING AND SHOWING BEEF AND SWINE. 1969. AGDEX 400/47. A. K. Jensen, Agricultural Education Department, Clemson University, Clemson, South Carolina 29631. Prepared for group instruction of in-school students. Price: Not for sale. 1 copy per State Supervisor.

50. SELECTING, FITTING AND SHOWING BEEF AND SWINE. 1969. AGDEX 400/47. F. E. Kirkley and Staff, Agricultural Education Department, Clemson University, Clemson, South Carolina 29631. Prepared for in-school agriculture students in studying selecting, fitting and showing beef and swine. Price: Not for sale. See ERIC System for availability.
51. FEEDING LIVESTOCK. 1968. AGDEX 400/50. Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in developing lesson plans in the Feeding of Livestock area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.
52. SOURCE UNIT IN FEEDS AND FEEDING. 1969. AGDEX 400/50. Larry R. Siegfried, Agricultural Education Section, Department of Vocational Education, Colorado State University, Fort Collins, Colorado 80521. Teaching plans for a unit in Feeds and Feeding. Price: \$1.00. Limited to single copy distribution.
53. MEAT CUTS--172. 1969. AGDEX 400/73. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. This is a series of 14 overhead transparency masters, plus 14 overlays. Carcass diagrams show the bone structure and wholesale meat cuts of each of the major meat animals. Carcasses are shown for beef, lamb, pork, and veal. Six plates with overlays show typical retail cuts and depict comparable cuts of beef, lamb, pork, and veal. Price: \$2.25.
54. ESSENTIALS OF COMPETITIVE LIVESTOCK MARKETING. No. 525. 1969. AGDEX 400/840. Edited by Charles Urbanic. Agriculture Education Teaching Materials Center, Texas A & M University, College Station, Texas 77846. Most of the technical information was contributed by members of the American Stockyards Association. Describes in detail the many phases of the livestock marketing industry. Illustrated. Price: \$.85.
55. IMPROVING DAIRY CATTLE BREEDING EFFICIENCY. 1970. AGDEX 410/30. Victor I. Bellard and Lyle L. Wicks, Instructional Materials Service, Division of Agricultural Education, 201 Stone Hall, Cornell University, Ithaca, New York 14850. Primary concerns are the development of good management practices and the utilization of breeding and health records to maintain high breeding efficiency in the dairy herd. The teaching packet includes a lesson plan, overhead projectual masters and selected references useful in presenting the unit. Price: \$1.00.
56. ARTIFICIAL INSEMINATION--171. 1969. AGDEX 410/30. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. This set of overhead transparency masters includes 17 plates plus 7 overlays. Diagrams explain anatomy, embryology and artificial insemination of the cow. Included is a series showing normal and abnormal presentations of the calf for delivery. Other plate subjects include: Organs of Reproduction of the Cow; Oogenesis; Circulatory Routes in the Young Mammalian Embryo; Pelvic Bones of the Cow; and Reproductive Tract of the Bull. Price: \$2.25.
57. JUDGING DAIRY CATTLE. 1969. AGDEX 410/45. W. H. Witt, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 16-page, 2-color publication was developed as an aid in preparing judging teams. Besides explaining judging techniques, it shows how to use the judging cards for determining the final placing on a production ring, and how to

properly mark the cards after a placing has been determined. Price: \$.20 postpaid when payment accompanies order.

58. CATTLE FEEDERS' GUIDELINES FOR THE SOUTHWEST. No. 523. 1968. AGDEX 420/50. Frank Litterst, Agriculture Education Teaching Materials Center, Texas A & M University, College Station, Texas 77846. Contains technical information and many pictures and illustrations to assist teachers in teaching the subject matter. Price: \$1.65.

59. BEEF SLAUGHTERING, AV 135. 1969. AGDEX 420/70. Victor I. Bellard, Instructional Materials Service, Division of Agricultural Education, 201 Stone Hall, Cornell University, Ithaca, New York 14850. A set of 75 color slides with a folder which includes a copy of the script, a list of references and instructions for using the unit. A student quiz, glossary of terms, steps in beef slaughter and a beef carcass chart, all suitable for reproduction, are also included. Price: \$18.00 for slides, lesson plan and script. \$3.50 for taped explanation. Purchase of the taped script is optional.

60. APPRAISING MARKET HOGS FOR CARCASS MERIT, Slide Series and Script. 1969. AGDEX 440/40. W. H. Bruner, Extension Specialist Animal Science, and B. D. VanStavern, Extension Meat Specialist, The Ohio State University. Available from: Ohio Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A series of 30 color slides and script which illustrates the slides. The slide series is intended to assist the student in learning how to appraise market hogs for carcass value. Live hogs of different grades were obtained and photographed. The hogs were slaughtered in the meat laboratory and selected cuts photographed. Price: \$4.75.

61. SWINE DIGESTION, Slide Series and Script. 1969. AGDEX 440/50. James R. Foster, Animal Science Department, Purdue University. Available from: Ohio Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A series of 12 color slides and script which illustrates the slides. The slides show the digestive process from the mouth to the large intestine. Cut away drawings by a medical illustrator was used to show the process. Permission to distribute the slide series and script to teachers of vocational agriculture was granted by Dr. Foster. Price: \$2.00.

AGDEX 500 SOILS

62. SOIL IN RELATION TO CROPS, HS 8. 1968. AGDEX 500. Billy J. Vice, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the basic crop and soil science area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

63. PHYSICAL PROPERTIES OF SOIL, HS 1. 1968. AGDEX 520. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the soil physical science area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

64. USING FERTILIZERS AND OTHER SOIL-BUILDING MATERIALS, HS 4. 1969. AGDEX 540. Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the soil fertility area. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

65. NITRATES IN WATER SUPPLIES, FIELD CROPS, AND RUMINANT NUTRITION. VAS 4050. 1970. AGDEX 540. R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 12-page subject-matter unit discusses the many sources of pollutants in our environment. It deals with some of the following questions: (1) How much nitrate is being lost in water? (2) How do plants take in nitrates? (3) How can I reduce the danger of nitrates? (4) How do nitrates get into water supplies? (5) How safe is well water? (6) How can I protect my water supply? and (7) What happens to nitrates consumed by ruminants? Price: \$.15 postpaid when payment accompanies order.

66. PLANNING THE NITROGEN PROGRAM. VAS 4009a. 1969. AGDEX 542. R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 16-page revised subject-matter unit discusses some of the following: (1) Common carriers of nitrogen; (2) Cheapest forms to buy; (3) How much to apply per acre; and (4) When and how to apply fertilizer. Price: \$.20 postpaid when payment accompanies order.

67. DETERMINING AVAILABLE POTASSIUM IN SOILS. VAS 4004b. 1970. AGDEX 543. R. L. Courson and T. R. Peck, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 12-page revised subject-matter unit gives the steps and equipment necessary for testing soils for potassium and illustrates how to record the results. Price: \$.15 postpaid when payment accompanies order.

68. ASCS AND YOU, Vol. 10, No. 5s (student manual) - Vol. 10, No. 5t (teacher's manual). 1969. AGDEX 577. R. W. Tulloch and Samuel M. Curtis, The Department of Agricultural Education, The Pennsylvania State University, University Park, Pennsylvania 16802. A description of Government Farm Programs: (a) government programs, (b) the farmer committee system, (c) history and background, (d) economic applications. Price: Not established. Publication will also be available from ASCS, Washington.

AGDEX 600 DISEASES AND PESTS

69. AGRICULTURAL CHEMICALS - PESTICIDES. 1969. AGDEX 606. Gary L. Cockram and John R. Crunkilton, Agricultural Education Division, Virginia Polytechnic Institute, Blacksburg, Virginia 24061. A series of seven teaching outlines to supplement Educational Television Lessons prepared for young and adult farmer classes. Each lesson outline includes objectives, problems, references, suggested visuals, content summaries, and other information to assist teachers in planning and conducting young and adult farmer classes in the area of Agricultural Chemicals. Price: Free. Supply limited. Single copy available to state staff upon request.

70. WEEDS: IDENTIFICATION AND CONTROL. 1969. AGDEX 640. Lyle Hotis and Lyle L. Wicks, Instructional Materials Service, Division of Agricultural Education, 201 Stone Hall, Cornell University, Ithaca, New York 14850. Eighty

color slides of 35 weeds considered to be the most common pests in field crops in the Northeast. Most weeds are shown in their natural habitat in both immature and mature stages. A third slide is used occasionally to emphasize a distinguishing characteristic. The script explains growth characteristics, crops infested and control measures. Suggestions for teaching are included. Price: \$12.00.

71. WEED CONTROL, CULTURAL AND CHEMICAL. 1969. AGDEX 641. Harlan E. Ridenour, Agricultural Education, and Donald E. Herr, Department of Agronomy, The Ohio State University. Available from: Ohio Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A student manual dealing with the control of weeds in farm crops. The economic importance of weed control is considered. Principles and concepts of weed control are presented with practical application to farm situations. Many illustrations are used to assist in explaining the concepts presented. Price: 1.50.

72. PLANT SCIENCE DEMONSTRATION - WEED CONTROL IN FENCE ROWS. 1969. AGDEX 641. R. L. Courson, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This demonstration is designed for student use. It provides full directions for carrying out the demonstration and observing the results. Price: \$.15 per pack of 10, postpaid when payment accompanies order.

AGDEX 700 AGRICULTURAL ENGINEERING

73. PROBLEM AREA OUTLINE FOR AGRICULTURAL MECHANIZATION. 1969. AGDEX 700. Reginald Henry and Curtis Weston, Agricultural Education Department, University of Missouri, 122 Waters Street, Columbia, Missouri 65201. The materials were developed as a guide for determining courses and course content in the five areas of instruction in agricultural mechanics.

74. LAND MEASUREMENT--190. 1969. AGDEX 700. Howard Rhoads, Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. This set of 14 overhead transparency masters, plus 6 overlays, begins with the "rectangular survey" system used in most of the United States, and explains the meaning of such fundamental terms as "base line" and "section." The second portion of the set explains how to measure various shapes of fields--rectangles, parallelograms, trapezoids, triangles and trapeziums--using the various basis units of land measurement. Price: \$1.95.

75. MATERIALS HANDLING - STUDENT WORKBOOK AND TEACHER RESOURCE UNIT. 1969. AGDEX 710. Brian I. Ingvalson and Forrest Bear, Bulletin Room, Coffey Hall, University of Minnesota, St. Paul, Minnesota 55101. There are twelve lessons; ten on new subject matter and two with assignments applicable to the home farm or an agricultural production unit. The text to be used is Planning Grain-Feed Handling No. 13 by the Midwest Plan Service and Farm Electric Motors by A.A.A.E. and Vo Ag. The material is recommended for high school and Vo Tech students. Price: 1 Resource Unit - 15 Student Workbooks, \$11.50; 1 Resource Unit - 20 Student Workbooks, \$15.00. Order Form AEAE-3.

76. APPRAISING FARM BUILDINGS. VAS 3017a. 1970. AGDEX 710. R. F. Espenschied, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 24-page revised subject-matter unit discusses problems of appraising farm buildings and methods of appraisal. Prices are current and a new engineering analysis sheet is included for confinement beef barns. Price: \$.30 postpaid when payment accompanies order.

77. FARM UTILITY BUILDINGS--DESIGNS, MATERIALS, PLANS. 1969.

AGDEX 713. G. Wallace Giles and G. E. Henderson, American Association for Agricultural Engineering and Vocational Agriculture, 120 Agricultural Engineering Center, University of Georgia, Athens, Georgia 30601. Provides information on the cause of building failures and what precautions to take in avoiding damage due to snow loads, high winds, lightning, etc. Describes how to provide post-free clearance for various sizes of farm buildings whether they be for machinery storage, shops, livestock or for general use. A complete listing of various plans for utility structures is included along with a statement of where they are available. Price: \$2.50.

78. BUILDING FARM FENCES. 1969. AGDEX 724. G. E. Henderson, American Association for Agricultural Engineering and Vocational Agriculture, 120 Agricultural Engineering Center, University of Georgia, Athens, Georgia 30601. Gives step by step procedures for building woven wire, barbed wire and board fences. Also gives procedures for installing movable fences and electric fences. Price: \$1.00.

79. PLOWS AND PLOWING. 1969. AGDEX 741. Harlan E. Ridenour, Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A 124 page manual structured for student use. The publication is extensively illustrated and includes the following sections: What is a good job of plowing?; Design of the plow bottom; Maintenance of the moldboard plow; Forces acting upon the moldboard plow; Principles of hitching the tractor; Hitching the drawn plow; Hitching the integral and the semi-integral mounted plow; Adjusting attachments; and Field adjusting the plow. Extensive assistance was provided by Professor S. G. Huber, Department of Agricultural Engineering, The Ohio State University, and the manufacturers of plows. Price: \$1.75.

80. CALIBRATING FIELD SPRAYERS. Slidefilm 442. 1969. AGDEX 744. E. W. Vernon and B. J. Butler, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 57 frames. It discusses the steps you should follow in the calibration of field sprayers before applying herbicides to field crops. Price: \$3.35 postpaid when payment accompanies order.

81. CALIBRATING A GRANULAR APPLICATOR. Slidefilm 443. 1969. AGDEX 744. E. W. Vernon and B. J. Butler, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a color, single-frame slidefilm of 32 frames. It discusses the factors that affect calibration and the steps you would follow when calibrating an applicator for use with herbicides or insecticides in granular form. Price: \$2.55 postpaid when payment accompanies order.

82. HAY BALER SERVICE, REPAIR AND MAINTENANCE. 1969. AGDEX 745. Giles L. Roehl and Forrest Bear, Bulletin Room, Coffey Hall, University of Minnesota, St. Paul, Minnesota 55101. The unit contains nine lessons on baler selection, cost of ownership, parts identification, drive mechanism, knottter, bale chamber, service, safety and optional equipment. Machinery company operator and service manuals are the required text to be used with the workbook. Recommended for high school and Vo Tech students. Price: 1 Resource Unit and 15 Student Workbooks, \$11.50; 1 Resource Unit and 20 Student Workbooks, \$15.00. Order Form AEAE-3.

83. COMBINES AND COMBINING. Revised 1970. AGDEX 745. Harlan E. Ridenour, Ohio Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A 105 page manual structured for student use. It is extensively illustrated by means of line drawings, charts, graphs, and pictures. The subject matter is divided into the following areas: (1) What is the value of doing a good job of combining?; (2) The basic design of the combine; (3) The operation of the combine; and (4) The economics of owning a combine. Price: \$1.75.

84. UNDERSTANDING AND MEASURING HORSEPOWER--ENGINES, MOTORS, TRACTORS. 1969. AGDEX 760. W. Harold Parady, American Association for Agricultural Engineering and Vocational Agriculture, 120 Agricultural Engineering Center, University of Georgia, Athens, Georgia 30601. It explains how horsepower is determined, what is meant by torque, how the horsepower and torque relationships are used to select an engine or an electric motor. The procedures for determining horsepower with various types of dynamometers is also given. Price: \$3.00.

85. THE INTERNAL COMBUSTION ENGINES. 1969. AGDEX 761. C. O. Jacobs, Department of Agricultural Engineering, University of Arizona, Tucson, Arizona 85721. A unit of instruction using the small gasoline engine as the teaching model or tool. Primary purpose is to teach the basic principles of internal combustion engines operation as it applies to the power and machinery phase of a complete program in agricultural mechanization. Price: \$3.50.

86. SMALL GASOLINE ENGINES, Vol. 10, No. 4s. 1969. AGDEX 761. H. J. Hoerner and L. P. Grant, The Department of Agricultural Education, The Pennsylvania State University, University Park, Pennsylvania 16802. Completely revised version of the popular 1965 edition. Price: \$1.25.

87. ENGINE ANALYSIS VISUALS. 1969. AGDEX 763. R. F. Espenschied, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a set of 97 visuals on engine analysis. They are 8 1/2 x 11" instructional illustrations for use in making overhead projection transparencies. They are contained in a pocket folder for filing. Price: \$2.55 postpaid when payment accompanies order.

88. TRACTOR OPERATION AND DAILY CARE -- Slide Set. 1969. AGDEX 763. American Association for Agricultural Engineering and Vocational Agriculture, 120 Agricultural Engineering Center, University of Georgia, Athens, Georgia 30601. The 151 color slides are from the publication of the same name. They are intended to help supplement the text when visuals can be used to advantage with a class. Price: \$53.90.

89. SELECTING AND STORING TRACTOR FUELS AND LUBRICANTS. 1969. AGDEX 763. W. Harold Parady and G. E. Henderson, American Association for Agricultural Engineering and Vocational Agriculture, 120 Agricultural Engineering Center, University of Georgia, Athens, Georgia 30601. Explains what constitutes quality in gasoline, LP-Gas and diesel fuels. Explains what is necessary to provide proper storage for each of the fuels. Discusses the different types of lubricants and the qualities that are necessary for proper lubrication in crankcase oils, gear oils, hydraulic oils and lubricating greases. Contains information on commercial and military oil specifications. Price: \$2.00.

90. BASIC ELECTRICITY AND PRACTICAL WIRING LESSONS, Vol. 10, No. 1t (Teacher's Manual) - Vol. 10, No. 1s (Student Manual). 1969. AGDEX 770. H. J. Hoerner and R. C. Wilson, The Department of Agricultural Education, The Pennsylvania State University, University Park, Pennsylvania 16802. Teacher's manual contains same material as student's manual plus teaching suggestions, demonstrations, and references. Price: \$1.00, Teacher's Manual-- \$.50 Student's Manual.
91. SKILL SHEETS FOR AGRICULTURAL MECHANICS. 1969. AGDEX 780. Thomas A. Hoerner, Agricultural Engineering Department, Iowa State University, Ames, Iowa 50010. This set includes 26 individual skill sheets for instruction in all phases of agricultural mechanics. Each skill sheet includes: procedure, plan or drawing, materials needed, abilities and understanding taught and an evaluation sheet. Price: \$1.00.
92. REFERENCE MATERIALS FOR TEACHING AGRICULTURAL MECHANICS, AG. ED. SERIES, Vol. 2., No. 1. 1969. AGDEX 781. Curtis R. Weston and Richard Loberger, Instructional Materials Laboratory, Room 8, Industrial Education, University of Missouri, Columbia, Missouri 65201. The publication contains a listing of texts and references available in the area of agricultural mechanics. It includes the source and price of the material as well as the suggested level of use and publishing date. Price: \$1.50.
93. HOW TO BUILD A CALF CREEP FEEDER, PLAN NO. 302. 1969. AGDEX 781. Curtis Weston, Marion Kimmons, Dale Pontius, Instructional Materials Laboratory, Room 8, Industrial Education, University of Missouri, Columbia, Missouri 65201. The bulletin is a guide and general plan to use in constructing a calf creep feeder. Price: \$.40.
94. HOW TO BUILD A SALT AND MINERAL FEEDER, PLAN NO. 303. 1969. AGDEX 781. Curtis Weston, Marion Kimmons, Dale Pontius, Instructional Materials Laboratory, Room 8, Industrial Education, University of Missouri, Columbia, Missouri 65201. The bulletin is a guide and general plan for constructing a salt and mineral feeder. Price: \$.40.
95. HOW TO BUILD PICKUP RACKS, PLAN NO. 403. 1969. AGDEX 781. Curtis Weston, Marion Kimmons, Dale Pontius, Instructional Materials Laboratory, Room 8, Industrial Education, University of Missouri, Columbia, Missouri 65201. A guide for construction of pickup racks. The plan can be modified for various makes of pickups or to use available materials. Price: \$.40.
96. FARM ARC WELDING PROCEDURES, NO. 524. 1968. AGDEX 785. Joe Barton and C. B. Edwards, Agricultural Education Teaching Materials Center, Texas A & M University, College Station, Texas 77846. Technical information well illustrated on a practical basis. (49 pages) Price: \$.50.

AGDEX 800 AGRICULTURAL ECONOMICS

97. PLANNING YOUR FARM BUSINESS. 1969. AGDEX 811. J. H. Herbst, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 32-page booklet is a revision of the 1960 edition. The item includes appropriate space for recording resource appraisal for farm planning purposes (soil maps, field maps, labor available, etc.), and then takes a step-by-step approach in planning the farm business. Some of the steps include a plan for using the land, a livestock program for the farm, an estimate of value of production, and an estimate of costs. Space is also provided for planning for credit during the transition period. Price: \$.30 postpaid when payment accompanies order.

98. LAW FOR THE FARMER. VAS 2018a. 1970. AGDEX 817. N.G. P. Krausz, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 24-page revised subject-matter unit discusses legal problems, chiefly from the standpoint of Illinois farmers. Areas covered are: Property; landlord and tenant; farm labor; drainage and water rights; fences; livestock; and animal diseases. Price: \$.30 postpaid when payment accompanies order.

99. LEGAL PRINCIPLES FOR FARM MANAGERS. Vol. 9, No. 5t. 1968. AGDEX 817. S. M. Curtis, The Department of Agricultural Education, The Pennsylvania State University, University Park, Pennsylvania 16802. A teacher's plan, including subject matter outline, and worksheets, for teaching farm law. Nine lessons. Price: \$1.25.

100. WHAT RECORDS TELL ABOUT THIS FARM. Slidefilm 357A. 1968. AGDEX 818. J. H. Herbst, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana 61801. This is a color, single-frame slidefilm of 65 frames. It shows the record results obtained from a farm in central Illinois and compares these results with standards for similar farms. Measures are obtained for crop efficiency, livestock efficiency, volume of business, farm costs, and earnings of the entire business. Also included is a system for trouble-shooting the farm business, with a discussion of the strong and weak points of the business. Price: \$3.60 postpaid when payment accompanies order.

101. 1967 FARM BUSINESS SUMMARY BY TYPE OF FARM. 1968. AGDEX 818. T. R. Nodland and E. A. Persons, Bulletin Room, St. Paul Campus, University of Minnesota, St. Paul, Minnesota 55101. A compilation of the farm business summaries of over 900 Minnesota farms according to type of farm. Farm types reported are Cash crops; Dairy; Hogs; Dairy and hogs; Dairy and cash crop; Hogs and feeder cattle; Hogs and cash crops; Feeder cattle and cash crops; Dairy, hogs and cash crops; Hogs, feeder cattle and cash crop. Price: \$.50.

102. USE OF CREDIT VISUALS. 1968. AGDEX 832. Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This is a set of six 8 1/2 x 11" instructional illustrations printed on heavy paper. They are for making transparencies for overhead projection, for use with an opaque projector, or for direct viewing. This set illustrates the use of a cash flow budget. The set is contained in a manila pocket folder for filing. Price: \$.25 postpaid.

103. EDUCATION REGARDING CREDIT FOR AGRICULTURAL PRODUCTION, TEACHING SOURCE UNITS. 1969. AGDEX 832. Lloyd J. Phipps, Gerald R. Fuller, and Paul R. Wesbecher, Agricultural Education Division, University of Illinois, 357 Education Building, Urbana, Illinois 61801. Teaching source units contain 4 units of instruction on determining where to use credit for buildings, machinery, and equipment, and 6 units of instruction on determining how to use credit. Price: Copies free while supply lasts.

104. AGRICULTURAL COOPERATIVES PUBLICATION AB - 1 1969. 1969. AGDEX 836. J. D. Oliver, Agricultural Education Division, Virginia Polytechnic Institute, Blacksburg, Virginia 24061. A 33-page series of teaching outlines for use in developing teaching plans in the area of agricultural cooperatives in agricultural education programs. Contains objectives, problems, references, suggested visual aids, content summaries, and other information to assist teachers. Problem areas include: Understanding the Nature of Cooperatives; Comparing a Cooperative with other Methods of Doing Business; Organizing and Operating Cooperatives and the Services Provided. Price: Free.

105. INSTRUCTIONAL UNIT OF AGRICULTURAL MARKETING PRINCIPLES. 1969. AGDEX 840. F. G. McCormick and P. R. Zurbrick, Department of Agricultural Education, University of Arizona, Tucson, Arizona 85721. A teacher's manual containing five instructional units dealing with Agricultural Marketing Principles. Price: Free.

106. AGRICULTURAL CHARTS VISUALS. 1969. AGDEX 850. This is a set of 51 8 1/2 x 11" instructional illustrations printed on heavy paper. They are for making transparencies for overhead projection, for use with an opaque projector, or for direct viewing. The charts in this set are based on information in the USDA Handbook of Agricultural Charts for 1968. The set is contained in a manila pocket folder for filing. Price: \$1.40 postpaid when payment accompanies order.

AGDEX 900 AGRICULTURAL OCCUPATIONS

107. A SET OF TRANSPARENCIES ON SUPERVISED OCCUPATION EXPERIENCES, BUSINESS PROCEDURES AND CAREER OPPORTUNITIES. 1969. AGDEX 900/00. A. K. Jensen, Agricultural Education Department, Clemson University, Clemson South Carolina 29631. Transparencies are appropriate for group instruction in Agricultural Sales and Services courses. Price: Not for sale. See ERIC System for availability--VT 9955, Business Procedures (Transparencies); VT 9956, Supervised Occupation Experiences; VT 9949, Career Opportunities.

108. INTRODUCING AGRICULTURAL CAREER EXPERIENCES. 1969. AGDEX 900/00. Larry H. Erpelding, et al. Available from: James Albracht, 103 Holton Hall, Kansas State University, Manhattan, Kansas 66502. A guide for the development of occupational programs in agriculture. The roles of the teacher, administrator, counselor, student, parent and employer are defined along with suggestions for the implementation of agricultural career experience programs. Price: \$1.50.

109. CAREERS IN GOVERNMENT SERVICES--178. 1969. AGDEX 900/00. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. Government job opportunities in agriculture are pictured and described in this 48-frame color filmstrip, with taped narration and illustrated script. Typical jobs included in the filmstrip are dairy inspector, timber appraiser, pest control inspector and weed abatement foreman. Price: \$7.95 (less when purchased as part of set). One of eight sound filmstrips in set, "New careers in Agriculture," that is available as a complete set--filmstrips, illustrated scripts, and taped narration--for \$49.00. (Set reviewed and approved by the American Personnel and Guidance Association.)

110. OCCUPATIONAL OPPORTUNITIES AND TRAINING NEEDS FOR AGRICULTURAL EMPLOYMENT IN SELECTED AREAS OF ARIZONA. 1969. AGDEX 900/00. J. B. Hamilton, Department of Agricultural Education, University of Arizona, Tucson, Arizona 85721. A report of the first of a series of studies designed to obtain a comprehensive analysis of the total field of agricultural occupations in Arizona. Price: Free. Limited supply available.

111. UNITS FOR INDIVIDUALIZED INSTRUCTION IN AGRICULTURAL SALES AND SERVICE OCCUPATIONS. 1969. AGDEX 900. Raymond Clark, Urban Owen, et al. Available from: Don Cronkhite, MVTVA, Teacher of Vocational Agriculture, Stockbridge, Michigan 49285. Each of the following units is intended as a student manual which can be used for individualized instruction. A standard format has been followed in each of the units. The units are divided into appropriate lessons in the area indicated by the title. Each lesson presents a short core content followed by suggested student activities and a suggestion for evaluation. Several

transparency patterns are included as is a bibliography which includes relevant books, bulletins, charts, motion pictures, and slide sets for each lesson.

<u>Unit Name</u>	<u>AGDEX</u>
1. Career Opportunities	900/00
2. Orientation to Supervised Occupational Experience Program	900/00
3. Human Relations in Agri-Business	900/60
4. Agricultural Salesmanship	900/30
5. Organization and functions of Agricultural Business	900/20
6. Business Procedures	900/10
7. Feed Sales and Service	921/30
8. Garden Center	951/30
9. Fertilizer-Sales and Service	923/30
10. Agricultural Chemicals-Sales and Service	924/30
11. Farm Equipment Sales and Service	931/30
12. Farm Power Sales and Service	931/30
13. Electric Power Sales and Service	933/30
14. Florist Shop	950/30
15. Tractor Tune-up in the Farm Equipment Business	930/50
16. Parts Man in the Farm Equipment Business	930/30
17. Special Unit - An Individualized Unit for Assigning Numerical Grades to Corn	921
Index of Supplementary Materials to Accompany Instructional Units in Agri-Business, 75 pp. @ \$2.50 plus postage	900
Price: \$.75 plus postage for each title.	

112. APPLYING FOR A JOB. VAS 6001. 1969. AGDEX 900/05. J. H. Herbst, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana Illinois 61801. This 12-page subject-matter unit was designed for use in the Agricultural Business program. Divisions of the unit include the following: How to decide on the kind of job to apply for; taking a personal inventory; getting additional training; how to find out what jobs are available; writing a letter of application; and interviewing with a prospective employer. Price: \$.15 postpaid when payment accompanies order.

113. SELLING ACTIVITIES IN THE FARM BUSINESS. 1969. AGDEX 900/30. Raymond M. Clark and C. Sutherland, College of Education, Michigan State University. Available from: Don Cronkhite, MATVA, Teacher of Vocational Agriculture, Stockbridge, Michigan 49285. (Check for availability and price.) The 22, 2 x 2 color slides and accompanying script are intended as a resource for the unit on agricultural chemicals and depict many of the activities that a student-employee may be involved with if employed in the area of sales in an agri-business. The set follows a customer and the student-employee from the approach to the closing of the sale.

114. CAREERS IN ANIMAL INDUSTRY--183. 1969. AGDEX 911/00. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. Off-farm jobs in animal industry are described in this 47-frame color filmstrip with taped narration and illustrated script. Typical jobs discussed include those of dairy-herd tester, poultry breeder, livestock buyer and breed association fieldman. Price: \$7.95. (Less when purchased as part of set.)

115. HORSE FARM EMPLOYEE, NO. 32. 1969. AGDEX 911. Ronnie Money and Bill Tomlinson, Agriculture Education Teaching Materials Center, Texas A & M University, College Station, Texas 77846. Course of study including assignment sheets, information sheets, tests, and answer sheets. Additional references required. Price: \$6.35.

116. CAREERS IN CROPS--182. 1969. AGDEX 912/00. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. Both on-farm and off-farm jobs in crops are discussed in this 48-frame color filmstrip with taped narration and illustrated script. Color photos and drawings are used to describe such jobs as fieldman, processing plant employee and salesman. Price: \$7.95 (less when purchased as part of set). One of eight sound filmstrips in set, "New Careers in Agriculture," that is available as a complete set--filmstrips, illustrated scripts, and taped narration--for \$49.00. (Set reviewed and approved by the American Personnel and Guidance Association.)

117. CAREERS IN FARM SUPPLIES--179. 1969. AGDEX 920/00. Vocational Education Production, California State Polytechnic College, San Luis Obispo, California 93401. Job opportunities in the \$10-billion-a-year farm supplies industry are reviewed in this 47-frame color filmstrip with taped narration and illustrated script. Typical jobs pictured and described include the co-op manager, the farm-store salesman, and the feed-mill employee. Price: \$7.95 (less when purchased as part of set).

118. CAREERS IN FARM SERVICES--175. 1969. AGDEX 920/00. Vocational Education Production, California State Polytechnic College, San Luis Obispo, California 93401. Job opportunities in the expanding field of farm services are described in this 52-frame sound filmstrip in full color, with taped narration and illustrated script. Pesticide application, artificial insemination, marketing and custom harvesting are some of the jobs pictured in color photographs and drawings. Price: \$7.95 (less when purchased as part of set).

119. OFFICE PROCEDURES USED IN THE AGRICULTURAL SERVICES. Revised 1969. AGDEX 920/10. Harry Plank, Penta County Technical College; and Norman Bloss, Graduate Associate, Agricultural Education Curriculum Materials Service, The Ohio State University. Available from: Ohio Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A combination text and workbook designed for the student who is working as an office clerk in an agricultural business. A test and answer supplement has been prepared for teacher use. Price: Student Unit, \$1.25; Teacher Unit, \$2.00.

120. SALESMANSHIP IN AGRICULTURAL BUSINESS. VAS 6002. 1970. AGDEX 920/31. J. H. Herbst, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 20-page subject-matter unit discusses various principles and procedures involved in salesmanship, with emphasis on agricultural business. Major divisions include the following: the salesman's role in the economy; personal qualities that are important; what a salesman should know; how a customer decides on a product; opening a sales interview; handling objections; and closing a sale. Price: \$.25 postpaid when payment accompanies order.

121. GRAIN GRADING SLIDES (CORN). 1969. AGDEX 921. Raymond M. Clark and Walter McCarley, College of Education, Michigan State University. The 35, 2 x 2 color slides and script take the student through a step by step procedure on corn grading. Examples of various types of kernel damage and testing equipment are also shown. The set is to be used as a supplement to the source unit entitled, "An Individualized Instructional Unit for Assigning Numerical Grades to Corn." Available from: Check with Don Cronkhite, MATVA, Teacher of Vocational Agriculture, Stockbridge, Michigan 49285 for availability and price.

122. INTRODUCTION TO FEED SALES AND SERVICE, SLIDES. 1969. AGDEX 921/30. Raymond M. Clark and Urban Oen, College of Education, Michigan State University. A slide and script set that is intended to supplement the source unit for Feed Sales and Service. The 43, 2 x 2 color slides illustrate many of the activities and competencies that are a necessary part of the Feed and Service business. Available from: Check with Don Cronkhite, MATVA, Teacher of Vocational Agriculture, Stockbridge, Michigan 49285 for availability and price.

123. OCCUPATIONAL EXPERIENCE--FARM POWER AND EQUIPMENT. 1969. AGDEX 930. Raymond M. Clark and Urban Oen, College of Education, Michigan State University. This is one of a series of slide and script sets prepared to supplement source units in agricultural business. The 43, 2 x 2 color slides are to be used with the source units on Farm Power Sales and Service and Farm Equipment. The set illustrates the activities of students while in school and while on the job in a Farm Equipment business. Available from: Check with Don Cronkhite, MATVA, Teacher of Vocational Agriculture, Stockbridge, Michigan 49285 for availability and price.

124. BUSINESS PRACTICES FOR AGRICULTURAL MACHINERY DEALERS. Revised 1969. AGDEX 930/10. Harry Plank, Penta County Technical College; and Norman Bloss, Graduate Associate, Agricultural Education Curriculum Materials Service, The Ohio State University. The unit is designed for students who are working in an agricultural machinery dealership. It is divided into three parts: Service, Parts, and Sales. The manuals are organized to provide information concerning business practices and to provide exercises to enable the student to experience how the various procedures are carried out. Much valuable assistance was provided by farm machinery manufacturers and dealers. Price: Student Units, \$2.50; Teacher Units, \$1.50.

125. CAREERS IN FARM MACHINERY SALES AND SERVICE--174. 1969. AGDEX 931/00. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. Color filmstrip (50 frames) with taped narration and illustrated script that describes career opportunities in the field of farm machinery sales and service. Photographs, drawings and diagrams picture and explain the opportunities in this off-farm agricultural area. Price: \$7.95 (less when purchased as part of set). One of eight sound filmstrips in set, "New Careers in Agriculture," that is available as a complete set--filmstrips, illustrated scripts, and taped narration--for \$49.00. (Set reviewed and approved by the American Personnel and Guidance Association.)

126. HUMAN RELATIONS IN THE FARM EQUIPMENT BUSINESS. 1969. AGDEX 931/60. Raymond M. Clark and others, College of Education, Michigan State University. The slide and script set is intended to be used with the Source Unit for Farm Equipment and depicts some of the unwritten procedures in an employer-employee relationship as well as between employer and customer. The 18, 2 x 2 color slides illustrate some of the activities and necessary competencies in the business as well. Available from: Check with Don Cronkhite, MATVA, Teacher of Vocational Agriculture, Stockbridge, Michigan 49285 for availability and price.

127. COTTON GIN EMPLOYEE, NO. 32. 1969. AGDEX 940. Frank Brownfield, Wayne Forest, and Lester Buford, Agriculture Education Teaching Materials Center, Texas A & M University, College Station, Texas 77846. Course of Study including assignment sheets, information sheets, answer sheets, tests, and answer sheets. Additional references required. Price: \$5.15.

128. CAREERS IN ORNAMENTAL HORTICULTURE--181. 1969. AGDEX 950/00. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. The rapidly-expanding field of ornamental horticulture is described and pictured in this 50-frame color filmstrip with taped narration and illustrated script. Careers depicted in photos and drawings include plant propagators, florists' brokers, landscape gardeners, turf specialists, and ground maintenance workers. Price: \$7.95 (less when purchased as part of set).

129. GARDEN CENTER SALES AND SERVICE. 1969. AGDEX 951/30. Raymond M. Clark and C. Sutherland, College of Education, Michigan State University. This is one of a series of slides and script sets prepared to supplement source units in agricultural business. The 27, 2 x 2 color slides and accompanying script illustrates the many experiences a student might have and the various jobs that he would be expected to perform as an employee in the garden center business. The slides and script were intended as part of the source unit for the Garden Center. Available from: Check with Don Cronkhite, MATVA, Teacher of Vocational Agriculture, Stockbridge, Michigan 49285 for availability and price.

130. CAREERS IN NATURAL RESOURCES MANAGEMENT--180. 1969. AGDEX 960/00. Vocational Education Productions, California State Polytechnic College, San Luis Obispo, California 93401. Aid consists of 53-frame color filmstrip with taped narration and illustrated manual. Photographs and drawings picture the expanding field of natural resources management. Typical jobs described include fishery technician, game management employee, park maintenance worker and park ranger. Price: \$7.95 (less when purchased as part of set). One of eight sound filmstrips in set, "New Careers in Agriculture," that is available as a complete set--filmstrips, illustrated scripts, and taped narration--for \$49.00. (Set reviewed and approved by the American Personnel and Guidance Association.)

131. AGRICULTURAL RESOURCES: A COURSE DESIGNED FOR HIGH SCHOOL STUDENTS. 1969. AGDEX 960. G. Z. Stevens and T. C. Leamer, The Department of Agricultural Education, The Pennsylvania State University, University Park, Pennsylvania 16802. Preliminary copy. Lists a breakdown of topics to be studied in a course named Agricultural Resources. Price: \$.50.

132. COURSE OF STUDY FOR AGRICULTURAL CONSERVATION EDUCATION. 1969. AGDEX 960. Welch Barnett, Floyd Ruble, Harlan Ridenour, Agricultural Education Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A 24-page course of study for agricultural conservation education for the 11th and 12th grades. The subject matter areas included are as follows: Forestry, Soil and Water Management, Wildlife and Fish Management, Outdoor Recreation, Related Mechanics. Price: \$1.00.

AGDEX .10 - .60 PROFESSIONAL

133. TEXT BOOKS AND REFERENCES FOR VOCATIONAL AGRICULTURE. 1969. AGDEX .10/40. Tom Eachus, Vocational Instructional Materials Laboratory, Indiana State University, Terre Haute, Indiana 47809. A listing of current texts and reference materials for vocational agriculture. Price: Single copies free.

134. OHIO CURRICULUM MATERIALS CATALOG. Spring 1970. AGDEX .10/40. Harlan E. Ridenour, Ohio Agricultural Curriculum Materials Service, Room 201, 2120 Fyffe Road, Columbus, Ohio 43210. A catalog listing the curriculum materials for Agricultural Education that are available from the Ohio Agricultural Education Curriculum Materials Service. Price: Free.

135. FREE AND INEXPENSIVE MATERIALS FOR VOCATIONAL AGRICULTURE TEACHERS. 1969. AGDEX .10/40. Burl Carmichael and William H. Hamilton. Available from: Tom Eachus, Vocational Instructional Materials Laboratory, Indiana State University, Terre Haute, Indiana 47809. Commercial firms were contacted for educational materials they provide on a current basis. These were listed by source and identified by AGDEX file numbers. Price: Single copies free.

136. SELECTED REFERENCE BOOKS, MAGAZINES, FILMS, CHARTS, MANUALS AND OTHER AIDS FOR COLORADO VO-AG DEPARTMENTS. 1969. AGDEX .10/42. Agricultural Education Section, Department of Vocational Education, Colorado State University, Fort Collins, Colorado 80521. Same as title. Price: \$1.00.

137. IVATA - 1969 - TRANSPARENCY MASTERS FOR VOCATIONAL AGRICULTURE. 1969. AGDEX .10/44. Russell Johnson, John Pothoven, John Cairnes and Keith Carlson, Agricultural Engineering Department, % Thomas A. Hoerner, Iowa State University, Ames, Iowa 50010. Packet includes 250 masters for transparencies on the following topics: Small Gasoline Engines, Carpentry Construction, Animal Breeding, Swine Artificial Insemination, FFA, Crop Production, Vo Ag Orientation and A.O.E.E. Price: \$10.00 - Check to Iowa Vocational Agriculture Teachers Association.

138. TWO YEAR CORE CURRICULUM FOR AGRICULTURAL EDUCATION IN ARIZONA. 1969. AGDEX .20/51. F. G. McCormick, Department of Agricultural Education, University of Arizona, Tucson 85721. This curriculum guide contains those basic areas of instruction that should be integrated into the instructional program during the first two years in vocational agriculture to provide greater indepth instruction during the junior and senior years. Price: Free as long as supply lasts.

139. A CORE CURRICULUM IN VOCATIONAL AGRICULTURE II. 1969. AGDEX .20/51. Thomas D. Rhoads and William H. Hamilton. Available from: William H. Hamilton, Bldg "G", Purdue University, Lafayette, Indiana 47907. A series of lesson plan outlines for two-thirds of a Vo. Ag. II Course of Study. The lessons were identified and reviewed by a panel of teachers. Price: Single copies free.

140. AGRICULTURE II BASIC AGRICULTURAL SCIENCE- CURRICULUM GUIDE - SECTION A. 1969. AGDEX .20/51. C. O. Loreen, Agricultural Education, Washington State University, Pullman, Washington 99163. Teaching units are grouped under: Individual Student Development, Animal Science, Plant Science, Soil Science. References and transparency masters included. Price: Not available for purchase. Teacher educators and supervisors will be supplied single copies upon request.

141. AGRICULTURE II BASIC AGRICULTURAL SCIENCE - A CURRICULUM GUIDE, SECTION B: AG. MECHANICS. 1969. AGDEX .20/51. Jay M. Wood, Agricultural Education, Washington State University, Pullman, Washington 99163. Teaching units cover: Agricultural Electricity, Power Tool Usage and Safety, Painting and Glazing, Concrete, Pipe Work, Tap and Die, Home Shop Management. Price: Not available for purchase. Teacher Educators and Supervisors will be supplied single copies upon request.

142. CURRICULUM GUIDE--AGRICULTURAL EDUCATION GRADES 9 to 12, CONCEPT LEARNING IN PLANT SCIENCE, ANIMAL SCIENCE AND AGRICULTURAL MECHANICS. 1969. AGDEX .20/51. Vocational Agriculture Teachers. Department of Education, Agricultural Education Service, P. O. Box 2360, Honolulu, Hawaii 96804. This guide is structured on concept learning for each subject area in agriculture--Plant Science, Animal Science and Agricultural Mechanics. Concept learning on Leadership Development and Vocational Guidance is also emphasized. Price: \$2.00. Limited distribution.

143. A CORE CURRICULUM IN VOCATIONAL AGRICULTURE I. 1969. AGDEX .20/51. Thomas Rhoads and William Hamilton. Available from: William H. Hamilton, Bldg. "G", Purdue University, Lafayette, Indiana 47907. A series of lesson plan outlines for two-thirds of a Vo. Ag. I Course of Study. Lessons were identified by a panel of teachers and then reviewed by the same group. Price: Single copies free.

144. COURSE OF STUDY - FARM PRODUCTION AND MANAGEMENT. 1969. AGDEX .20/51. Julian M. Carter, Division of Vocational Technical Education, State Office Building, Montpelier, Vermont 05602. Memo. Price: Free.

145. LESSON PLANS FOR VOCATIONAL AGRICULTURE I, NO. 2001. 1969. AGDEX .20/51. Teaching Materials Center Staff. Agriculture Education Teaching Materials Center, Texas A & M University, College Station, Texas 77846. Technical information in topic or lesson plan form for instruction of the first year course in vocational agriculture. Contains the basic agricultural science information in the following subject matter areas: animal science, plant science, soil science, agricultural mechanics, and supervised experience programs. Includes 274 transparency masters that are discussed and described in the technical information. (555 pages). Follow the "Basic Curriculum Guide for Production Agriculture in Texas." Available to teachers in other states on a limited basis. Price: \$20.00.

146. TEACHER'S GUIDE AGRICULTURAL POWER AND MACHINERY. 1969. AGDEX .20/53. Committee-Teachers of Vocational Agriculture. Department of Agricultural Education, University of Georgia, Athens, Georgia 30601. A guide developed by teachers of agriculture who have the responsibility of teaching this specialized course at the secondary school level. Consultants were used. A member of the teacher training staff served as coordinator. Insufficient copies printed for general distribution.

147. TEACHER'S GUIDE FOR COURSE IN FARM MACHINERY OPERATION AND MAINTENANCE. 1969. AGDEX .20/53. Committee-Teachers of Vocational Agriculture. Department of Agricultural Education, University of Georgia, Athens, Georgia 30601. A guide developed by teachers of agriculture who have the responsibility of teaching this specialized course at the secondary school level. Consultants were used. A member of the teacher training staff served as coordinator. Insufficient copies printed for general distribution.

148. VOCATIONAL HORTICULTURE SPECIALTY PROGRAMS FOR SECONDARY STUDENTS FINAL REPORT. 1969. AGDEX .20/55. Paul E. Hemp, Division of Agricultural Education, 357 Education Building, University of Illinois, Urbana, Illinois 61801. A final report of a pilot program in Landscape and Grounds Maintenance conducted in two Illinois high schools. Price: \$.25.

149. TEACHER'S GUIDE FOR ORNAMENTAL HORTICULTURE. 1969. AGDEX .20/55. Committee-Teachers of Vocational Agriculture. Department of Agricultural Education, University of Georgia, Athens, Georgia 30601. A guide developed by teachers of agriculture who have the responsibility of teaching this specialized course at the secondary school level. Consultants were used. A member of the teacher training staff served as coordinator. Insufficient copies printed for general distribution.

150. ORNAMENTAL HORTICULTURE-SUGGESTED UNITS AND PROBLEM AREAS FOR A COURSE OF STUDY. 1969. AGDEX .20/55. Martin B. McMillion and Harold M. Pellett. Bulletin Room, St. Paul Campus, University of Minnesota, St. Paul, Minnesota 55101. The title is self-explanatory. Price: \$.50.

151. TEACHER'S GUIDE FOR COURSE IN PULPWOOD PRODUCTION. 1969. AGDEX .20/57. Committee-Teachers of Vocational Agriculture. Department of Agricultural Education, University of Georgia, Athens, Georgia 30601. A guide developed by teachers of agriculture who have the responsibility of teaching this specialized course at the secondary level. Consultants were used. A member of the teacher training staff served as coordinator. Insufficient copies printed for general distribution.

152. A COURSE OF STUDY FOR ADULT FARMER INSTRUCTION IN FARM MANAGEMENT AND FARM BUSINESS ANALYSIS, 2nd Edition. 1969. AGDEX .20/61. Ralph Palan and Edgar Persons. Bulletin Room, St. Paul Campus, University of Minnesota, St. Paul, Minnesota 55101. A complete guide for a course in farm business management for adults. It includes up to date information, useful in classroom instruction, taken from the 1968 farm business record analysis of Minnesota farms. Each lesson for the three year course includes a statement of objectives, teaching outline, suggested procedure and appropriate on-farm instructional activities. Price: \$4.50.

153. CHARACTERISTICS OF DISADVANTAGED STUDENTS AND IMPLICATIONS FOR PROGRAM DEVELOPMENT. 1970. AGDEX .30/20. James Albracht, 103 Holton Hall, Kansas State University, Manhattan, Kansas 66502. Characteristics of disadvantaged students and implications for the instruction and development of occupational education programs. Price: Free as long as supply lasts.

154. THIS COULD BE YOUR FUTURE! A CAREER IN TEACHING VOCATIONAL AGRICULTURE. 1969. AGDEX .30/21. Bob R. Stewart, Agricultural Education, 122 Waters Hall, University of Missouri, Columbia, Missouri 65202. A brochure developed for use with high school students.

155. PLANNING AND CONDUCTING COOPERATIVE EDUCATION PROGRAM IN AGRICULTURE. 1968. AGDEX .40/20. F. G. McCormick. Department of Agricultural Education, University of Arizona, Tucson 85721. A manual of guidelines and procedures on planning and conducting cooperative education programs in agriculture in the State of Arizona. Price: Free as long as supply lasts.

156. STANDARDS FOR MEASURES OF EFFICIENCY FOR 1969. 1969. AGDEX .40/21. J. H. Herbst, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 6-page item is revised and made available each year to serve as a means of comparison for records of adult farmers and for enterprises in students' farming programs. The Illinois Farm Business-Farm Management Summary from the preceding year furnishes the basis for measures of physical quantities. Current prices and costs are applied to

those figures to get estimates of dollar returns and costs. Price: \$.60 per pack of 10, postpaid when payment accompanies order.

157. EVALUATION OF OCCUPATIONAL EDUCATION PROGRAMS. 1970. AGDEX .40/50. James Albracht, 103 Holton Hall, Kansas State University, Manhattan, Kansas 66502. Guidelines for the evaluation of the product and process of occupational education programs. Price: Free as long as supply lasts.

158. VERMONT FFA MANUAL. 1970. AGDEX .50/10. James Sattler. Available from: Julian M. Carter, Division Vocational Technical Education, State Office Building, Montpelier, Vermont 05602. Contains section on leadership and awards program. Price: \$.75.

159. WORKBOOK OF THE OFFICIAL FFA MANUAL, NO. 908. 1969. AGDEX .50/10. Ike Trimble and L. M. Hargrave, Agriculture Education Teaching Materials Center, Texas A & M University, College Station, Texas 77846. Student workbook for the Official FFA Manual. Very helpful to student in studying the FFA Manual. Price: \$.35, less than 10 copies; \$.30, 10 or more copies.

160. TEACHER'S KEY FOR THE WORKBOOK OF THE OFFICIAL FFA MANUAL, NO. 909. 1969. AGDEX .50/10. L. M. Hargrave, Agriculture Education Teaching Materials Center, Texas A & M. University, College Station, Texas 77846. Provides the teacher with the answers to the workbook of the Official FFA Manual. Price: \$1.40.

161. THE ORGANIZATION AND OPERATION OF THE FFA CHAPTER, HS 90. 1968. AGDEX .50/10. Billy J. Vice, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the teaching of FFA work. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

162. DEVELOPING QUALITIES OF DEMOCRATIC LEADERSHIP, HS 91. 1968. AGDEX .50/10. Billy J. Vice and Robert Spillman, Instructional Materials Laboratory, Room 151 Taylor Education Building, University of Kentucky, Lexington, Kentucky 40506. An instructional unit for teacher use. The unit includes content for teacher use in lesson plan development in the teaching of good citizenship and leadership; and in parliamentary procedure skills needed by FFA members. Price: 1 copy free to State Directors and Head Teacher Trainers of Agricultural Education.

163. A GUIDE TO PARLIAMENTARY PRACTICES (Revised). 1969. AGDEX .50/51. W. H. Witt, Vocational Agriculture Service, University of Illinois, 434 Mumford Hall, Urbana, Illinois 61801. This 44-page, 5 1/2 x 8 1/2, 2-color publication is a revision of the booklet by the same title. Much effort was made in the revision to simplify the booklet and make it more understandable for student use. The second color was used to emphasize main points and examples. Price: \$.35 postpaid when payment accompanies order.